

Quentin CHANGEAT

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PhD student in Physics

Education:

- **2018-2021: PhD in Physics** – *University College London* (UK) – ESA ARIEL Mission – supervisor: Giovanna Tinetti
- **2017-2018: Master (MASt) in Applied Mathematics (Part III)** - *University of Cambridge* (UK) – Grade: 71% and E.M. Burnett Prize in recognition of excellent results
- **2015-2016: Master (MSc) in Environmental Technology** - *Imperial College* (London, UK) – Grade: Merit
- **2013-2016: Master (MEng) in General Engineering** - *Ecole des Mines* (Douai, FRA) – Grade: 15.1/20
- **2010-2013: CPGE: Equiv. Bachelor Degree in Mathematics/Physics** - *Lycée Daudet* (FRA) – Grade: A

Professional experiences:

- **2018 Sept: ESA Ladybird Guide to Operation Spacecraft training course** (Libramont, BE)
1-week course on spacecraft operations, learning through practical examples. Simulation of a spacecraft failure.
- **2016 Oct – 2017 Sep: Consultant in IT at Wavestone** (Paris, FRA)
Designing and securing Alstom new IT system. Cybersecurity advisor, analysis of IT operations (flow openings, VPN configurations, security exceptions), assisting every level of the migration.
- **2015 Nov - 2016 Feb: Freelance Consultant in Aerospace at OutSmart Insights Ltd** (London, UK)
Technology scanning for an aerospace company (BAE Systems), identifying interesting technologies, application to jet aircrafts, TRL assessment of the technologies and patent identification.
- **2015 May-Sept: Internship at TOTAL SA. Study of R&D localization** (Pau, FRA)
Assistance to TOTAL's strategy of R&D reorganisation by comparing the R&D potential of 11 countries. Use of a multicriteria approach based on analysing reports and conducting interviews with TOTAL's collaborators.

Research Projects:

- **2018 Jan-May: MASt Essay on “Redshift Space Distortion” at the University of Cambridge.**
Understanding and reproducing literature results on the fact that the repartition of galaxies in the sky is affected by their peculiar velocity. Calculation of the power spectrum in Kaiser linear and CLPT cases.
- **2016 Apr-Oct: MSc Thesis on “The impact of Shading and orientation issues on Solar Panels performances” at Imperial College London.**
Building of a statistical method to detect panels with shading and orientation issues. Creation of a java software to analyse a large dataset of panel outputs. Assessment of the amount of energy lost in UK due to these issues.
- **2015 Jan-May: Research Project on “Low Reynold flows around Ellipsoid obstacles” at Ecole des Mines.**
Study of the impact of variables (flow speed, flow characteristics, obstacle shape, obstacle angle...) on drag and lift coefficients through numerical simulations with ANSYS Fluent.
- **2014 May-Aug: Internship on “Small cost collaborative energy solution for summerhouses” at Aalborg University.**
Creation of a thermal model of an off-grid summerhouse and comparison of energy solutions for heat and electricity. Temperature monitoring and data analysis.
- **2013 Jan-Jul: Research Project on “Numerical and Perturbative methods for the 3-bodies problem” at Lycée Daudet.**
Creation of a 3-Dimentional model (programmed in Java + OpenGL) in order to compare the Perturbative and the Runge Kutta methods for the 3-Bodies problem. Assessment on the Sun-Earth-Moon system and comparison with the Online NASA database.

Languages, Skills and Hobbies:

Languages:

- French: Mother tongue
- English: Fluent (TOEIC 905/990 – IELTS 7,5/9)

Computer Skills:

- Numerical Modelling (ANSYS, Solidworks)
- Programming and algorithmic (C, Java, OpenGL, HTTP)

Hobbies:

- Telescope observation
- Skiing: Competition & teaching (23 years).
- Volleyball: Alès and Douai Club (7 years)
- Kitesurfing (8 years)
- Sailing (2014 Course Croisière EDHEC racing cup)